

Attorney's Pocket No.: 12800-003001

1831  
#8

RECEIVED  
MAR 18 2002

TECH CENTER 1600/2900

11-26

Applicant : James R. LaDine et al.      Art Unit : 1641  
Serial No. : 09/835,273      Examiner : Unknown  
Filed : April 13, 2001  
Title : PROTEOMIC ANALYSIS BY PARALLEL MASS SPECTROMETRY

Commissioner for Patents  
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Applicant submits the references listed on the attached form PTO-1449, copies of which are enclosed. A copy of a communication from a foreign patent office in a counterpart application is also enclosed.

This statement is being filed within three months of the filing date of the application or before the receipt of a first Office action on the merits. Please apply any charges or credits to Deposit Account No. 06-1050.

RECEIVED

MAY 06 2002

Respectfully submitted,

TECH CENTER 1600/2900

Date: Mar. 7, 2002

Christine P. Bellon  
Reg. No. 41,611

Fish & Richardson P.C.  
225 Franklin Street  
Boston, Massachusetts 02110-2804  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906

60074147.doc

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, Washington, D.C. 20231.

March 7, 2002

Date of Deposit

Signature

Typed or Printed Name of Person Signing Certificate



<b>Substitute Form PTO-1449</b> (Modified)  <b>Information Disclosure Statement</b> <b>by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. <b>12800-003001</b>	Application No. <b>09/835,273</b>
	Applicant <b>James R. LaDine et al.</b>		<b>MAY 06 2002</b>
	Filing Date <b>April 13, 2001</b>	Group Art Unit <b>1641</b>	<b>TECH CENTER 1600/2900</b>

**RECEIVED**

**MAY 06 2002**

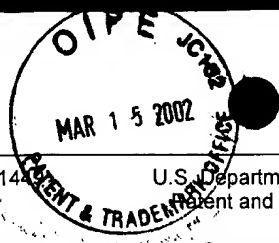
**TECH CENTER 1600/2900**

**RECEIVED**  
**MAR 18 2002**  
**TECH CENTER 1600/2900**

U.S. Patent Documents							
Examiner Initial	Desig. ID	Patent Number	Issue Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,470,753	11/28/95	Sepetov et al.			
	AB	5,547,835	08/20/96	Köster			
	AC	5,580,733	12/02/96	Levis et al.			
	AD	5,605,798	02/25/97	Köster			
	AE	5,625,184	04/29/97	Vestal et al.			
	AF	5,627,369	05/06/97	Vestal et al.			
	AG	5,691,141	11/25/97	Köster			
	AH	5,760,393	06/02/98	Vestal et al.			
	AI	5,821,063	10/13/98	Patterson et al.			
	AJ	5,851,765	12/22/98	Köster			
	AK	5,869,240	02/09/99	Patterson			
	AL	5,872,015	02/16/99	Venton et al.			
	AM	5,885,775	03/23/99	Haff et al.			
	AN	5,885,841	03/23/99	Higgs, Jr. et al.			
	AO	6,002,127	12/14/99	Vestal et al.			
	AP	6,017,693	01/25/00	Yates, III et al.			
	AQ	6,043,031	03/28/00	Köster et al.			
	AR	6,051,378	04/18/00	Monforte et al.			
	AS	6,054,047	04/25/00	Hindsgaul et al.			
	AT	6,057,543	05/02/00	Vestal et al.			

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AU	WO 99/61910	12/02/99	PCT				
	AV	WO 00/11208	03/02/00	PCT				
	AW	WO 00/29848	05/25/00	PCT				
	AX	WO 00/47999	08/17/00	PCT				

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	



Substitute Form PTO-1449 (Modified)  <b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12800-003001	Application No. 09/835,273
	Applicant James R. LaDine et al.		MAY 06 2002 TECH CENTER 1600/2900
	Filing Date April 13, 2001	Group Art Unit 1641	

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AY	WO 00/65353	11/02/00	PCT				
	AZ	WO 00/67017	11/09/00	PCT				

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AAA	Aebersold et al., "Quantitative Proteome Analysis: Methods and Applications," <u>Annals of the New York Academy of Sciences</u> , 2000, 919:33-47
	ABB	Bennick et al., "A Rapid Method for Selecting Specific Hybridoma Clones using Paramagnetic Dynabeads®," <u>Scand. J. Immunol.</u> , 1993, 38:212-214
	ACC	Blackstock and Weir, "Proteomics: quantitative and physical mapping of cellular proteins," <u>TIBTECH</u> , 1999, 17:121-127
	ADD	Borchers et al., "Identification of In-Gel Digested Proteins by Complementary Peptide Mass Fingerprinting and Tandem Mass Spectrometry Data Obtained on an Electrospray Ionization Quadrupole Time-of-Flight Mass Spectrometer," <u>Anal. Chem.</u> , 2000, 72:1163-1168
	ABE	Charlwood et al., "Analysis of N-linked Oligosaccharides Released from Glycoproteins Separated by Two-Dimensional Gel Electrophoresis," <u>Analytical Biochemistry</u> , 2000, 284:49-59
	AFF	Cordwell et al., "Subproteomics based upon protein cellular location and relative solubilities in conjunction with composite two-dimensional electrophoresis gels," <u>Electrophoresis</u> , 2000, 21:1094-1103
	AGG	Corthals et al., "The dynamic range of protein expression: A challenge for proteomic research," <u>Electrophoresis</u> , 2000, 21:1104-1115
	AHH	Dieden et al., "Isolation, identification and immunosuppressive activity of SDZ-IMM-125 metabolites from human liver microsomes," <u>Eur. J. Drug Metab. Pharmacokinetics</u> , 1999, 24:83-90
	AII	Emili and Cagney, "Large-scale functional analysis using peptide or protein arrays," <u>Nature Biotech.</u> , 2000, 18:393-397
	AJJ	Gatlin et al., "Automated Identification of Amino Acid Sequence Variations in Proteins by HPLC/Microspray Tandem Mass Spectrometry," <u>Anal. Chem.</u> , 2000, 72:757-763
	AKK	Gebhardt et al., "Adhesive Peptides Selected by Phage Display: Characterization, Applications and Similarities with Fibrinogen," <u>Peptide Res.</u> , 1996, 9(6):269-278
	ALL	Gu et al., "Assays of Ligand-Human Serum Albumin Binding Using Pulsed Ultrafiltration and Liquid Chromatography-Mass Spectrometry," <u>Combinatorial Chemistry &amp; High Throughput Screening</u> , 1999, 2:353-359
	AMM	Gygi et al., "Correlation between Protein and mRNA Abundance in Yeast," <u>Mol. Cell. Biol.</u> , 1999, 19(3):1720-1730
	ANN	Gygi et al., "Quantitative analysis of complex protein mixtures using isotope-coded affinity tags," <u>Nature Biotech.</u> , 1999, 17:994-999
	AOO	Gygi and Aebersold, "Mass spectrometry and proteomics," <u>Curr. Opin. Chem. Biol.</u> , 2000, 4:489-494
	APP	Gygi et al., "Measuring gene expression by quantitative proteome analysis," <u>Curr. Opin. Biotech.</u> , 2000, 11:396-401

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

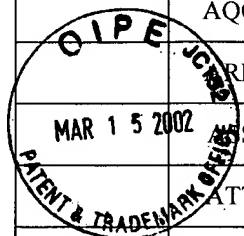
Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12800-003001	Application No. 09/835,273
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant James R. LaDine et al.	
		Filing Date April 13, 2001	Group Art Unit 1641

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
	AQQ	Gygi et al., "Evaluation of two-dimensional gel electrophoresis-based proteome analysis technology," <u>Proc. Natl. Acad. Sci. USA</u> , 2000, 97(17):9390-9395
	ARR	Hatzimanikatis et al., "Proteomics: Theoretical and Experimental Considerations," <u>Biotechnol. Prog.</u> , 1999, 15:312-318
	ASS	Hatzimanikatis, "Dynamical Analysis of Gene Networks Requires Both mRNA and Protein Expression Information," <u>Metabolic Engineering</u> , 1999, 1:275-281
	ATT	Hayden et al., "Analysis of Naturally Processed Peptides Eluted from HLA DRB1 *0402 and *0404," <u>J. Neurosci. Res.</u> , 1996, 45:795-802
	AUU	Haynes and Yates III, "Proteome profiling – pitfalls and progress," <u>Yeast</u> , 2000, 17:81-87
	AVV	Humphery-Smith and Blackstock, "Proteome Analysis: Genomics via the Output Rather Than the Input Code," <u>J. Protein Chem.</u> , 1997, 16(5):537-544
	AWW	Hunt et al., "Protein sequencing by tandem mass spectrometry," <u>Proc. Natl. Acad. Sci. USA</u> , 1986, 83:6233-6237
	AXX	Islam and Lindberg, "Detection of <i>Shigella</i> Type 1 and <i>Shigella flexneri</i> in Feces by Immunomagnetic Isolation and Polymerase Chain Reaction," <u>J. Clin. Microbiol.</u> , 1992, 30(11):2801-2806
	AYY	Jackson et al., "Binding of human endothelium to <i>Ulex europaeus</i> I-coated Dynabeads: application to the isolation of microvascular endothelium," <u>J. Cell Science</u> , 1990, 96:257-262
	AZZ	Kandzia et al., "Magnetic Albumin/Protein A Immunospheres. I. Preparation, Antibody Binding Capacity and Chemical Stability," <u>J. Immunological Methods</u> , 1984, 75:31-41
	AAAA	Kvalheim et al., "Elimination of B-Lymphoma Cells from Human Bone Marrow: Model Experiments Using Monodisperse Magnetic Particles Coated with Primary Monoclonal Antibodies," <u>Cancer Res.</u> , 1987, 47:846-851
	ABBB	Link et al., "Direct analysis of protein complexes using mass spectrometry," <u>Nature Biotechnol.</u> , 1999, 17:676-682
	ACCC	MacKenzie et al., "Bifunctional fusion proteins consisting of a single-chain antibody and an engineered lanthanide-binding protein," <u>Immunotechnology</u> , 1995, 1:139-150
	ADDD	Mann, "Quantitative proteomics?," <u>Nature Biotechnol.</u> , 1999, 17:954-955
	AEEE	McCormack et al., "Direct Analysis and Identification of Proteins in Mixtures by LC/MS/MS and Database Searching at the Low-Femtomole Level," <u>Anal. Chem.</u> , 1997, 69:767-776
	AFFF	Meeusen et al., "Mgm101p Is a Novel Component of the Mitochondrial Nucleoid That Binds DNA and Is Required for the Repair of Oxidatively Damaged Mitochondrial DNA," <u>J. Cell Biol.</u> , 1999, 145(2):291-304
	AGGG	Morel et al., "Towards the proteome of the rhodopsin-bearing post-Golgi compartment of retinal photoreceptor cells," <u>Electrophoresis</u> , 2000, 21:3460-3469
	AHHH	Nelson et al., "Comprehensive analyses of prostate gene expression: Convergence of expressed sequence tag databases, transcript profiling and proteomics," <u>Electrophoresis</u> , 2000, 21:1823-1831
	AIII	Nikolic et al., "Screening for Xenobiotic Electrophilic Metabolites Using Pulsed Ultrafiltration-Mass Spectrometry," <u>Combinatorial Chemistry &amp; High Throughput Screening</u> , 1999, 2:165-175
	AJJJ	Oda et al., "Accurate quantification of protein expression and site-specific phosphorylation," <u>Proc. Natl. Acad. Sci. USA</u> , 1999, 96:6591-6596

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

 RECEIVED  
MAY 06 2002

 MAR 18 2002  
TECH CENTER 1600/2900  
TECH CENTER 1600/2900


Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12800-003001	Application No. 09/835,273
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant James R. LaDine et al.	
		Filing Date April 13, 2001	Group Art Unit 1641

### Other Documents (include Author, Title, Date, and Place of Publication)

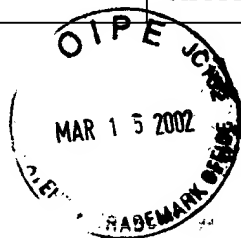
Examiner Initial	Desig. ID	Document
	AKKK	Owen and Lindsay, "Ferritin as a Label for High-Gradient Magnetic Separation," <i>Biophys. J.</i> , 1983, 42:145-150
	ALLL	Ozyhar et al., "Magnetic DNA Affinity Purification of Ecdysteroid Receptor," <i>J. Steroid Biochem. Molec. Biol.</i> , 1992, 43(7):629-634
	AMMM	Panigrahi et al., "Association of Two Novel Proteins, TbMP52 and TbMP48, with the <i>Trypanosoma brucei</i> RNA Editing Complex," <i>Mol. Cell. Biol.</i> , 2001, 21(2):380-389
	ANNN	Peter et al., "Purification of Prostate-Specific Antigen from Human Serum by Indirect Immunosorption and Elution with a Hapten," <i>Analytical Biochem.</i> , 1999, 273:98-104
	AOOO	Saleh et al., "Tra1p Is a Component of the Yeast Ada-Spt Transcriptional Regulatory Complexes," <i>J. Biol. Chem.</i> , 1998, 273(41):26559-26565
	APPP	Santoni et al., "Large scale characterization of plant plasma membrane proteins," <i>Biochimie</i> , 1999, 81:655-661
	AQQQ	Santoni et al., "Towards the recovery of hydrophobic proteins on two-dimensional electrophoresis gels," <i>Electrophoresis</i> , 1999, 20:705-711
	ARRR	Search Report with abstracts dated 2000 or earlier.
	ASSS	Simpson et al., "Proteomic analysis of the human colon carcinoma cell line (LIM 1215): Development of a membrane protein database," <i>Electrophoresis</i> , 2000, 21:1707-1732
	ATTT	Soskic et al., "Functional Proteomics Analysis of Signal Transduction Pathways of the Platelet-Derived Growth Factor $\beta$ Receptor," <i>Biochemistry</i> , 1999, 38:1757-1764
	AUUU	Spahr et al., "Simplification of complex peptide mixtures for proteomic analysis: Reversible biotinylation of cysteinyl peptides," <i>Electrophoresis</i> , 2000, 21:1635-1650
	AVVV	Taylor et al., "Proteomics of rat liver Golgi complex: Minor proteins are identified through sequential fractionation," <i>Electrophoresis</i> , 2000, 21:3441-3459
	AWWW	te Heesen et al., "An essential 45 kDa yeast transmembrane protein reacts with anti-nuclear pore antibodies: purification of the protein, immunolocalization and cloning of the gene," <i>Eur. J. Cell Biol.</i> , 1991, 56:8-18
	AXXX	Thomas et al., "Mass Spectrometry in Viral Proteomics," <i>Acc. Chem. Res.</i> , 2000, 33:179-187
	AYYY	Ushijima et al., "Removal of HIV antigens and HIV-infected cells in vitro using immunomagnetic beads," <i>J. Virol. Methods</i> , 1990, 29:23-31
	AZZZ	Van Breemen et al., "Pulsed Ultrafiltration Mass Spectrometry: A New Method for Screening Combinatorial Libraries," <i>Anal. Chem.</i> , 1997, 69(11):2159-2164
	AAAAA	Washburn and Yates III, "Analysis of the microbial proteome," <i>Curr. Opin. Microbiol.</i> , 2000, 3:292-297
	ABBBB	Yanagida et al., "Matrix assisted laser desorption/ionization-time of flight-mass spectrometry analysis of proteins detected by anti-phosphotyrosine antibody on two-dimensional-gels of fibroblast cell lysates after tumor necrosis factor- $\alpha$ stimulation," <i>Electrophoresis</i> , 2000, 21:1890-1898
	ACCCC	Yates III et al., "Direct Analysis of Protein Mixtures by Tandem Mass Spectrometry," <i>J. Protein Chem.</i> , 1997, 16(5):495-497
	ADDDD	Yates III et al., "Automated Protein Identification Using Microcolumn Liquid Chromatography-Tandem Mass Spectrometry," <i>Methods Mol. Biol.</i> , 1999, 112:553-569

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 12800-003001	Application No. 09/835,273
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))		Applicant James R. LaDine et al.	
		Filing Date April 13, 2001	Group Art Unit 1641

**Other Documents (include Author, Title, Date, and Place of Publication)**

Examiner Initial	Desig. ID	Document
	AEEEE	Zhang et al., "Matrix-assisted laser desorption mass spectrometric peptide mapping of proteins separated by two-dimensional gel electrophoresis: Determination of phosphorylation in <u>pancreatic</u> trypsin I," <u>Protein Science</u> , 1994, 3:677-686
	AFFFF	Zhao et al., "Screening Solution-Phase Combinatorial Libraries Using Pulsed Ultrafiltration/Electrospray Mass Spectrometry," <u>J. Med. Chem.</u> , 1997, 40:4006-4012



RECEIVED  
MAR 18 2002  
TECH CENTER 1600/2900

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	